



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

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Dear Mr. Gold:

On September 2, 2003, the Pennsylvania Department of Environmental Protection (PADEP) completed an evaluation of available site data and recommended that more data are necessary to evaluate both the human health indicator and the groundwater control indicator at the NOVA Chemical facility-Beaver Valley facility. The Environmental Protection Agency (EPA) has reviewed the PADEP recommendations and accompanying inspection report. Based on our evaluation, we believe that the environmental indicator for human health has been met at the NOVA facility. We believe that the groundwater control indicator has not yet been met, although our rationale differs from that provided by PADEP in their analysis. A full explanation follows.

Background

PADEP, in a work sharing partnership with the EPA Region III, conducted an Environmental Indicator (EI) Inspection of the NOVA Chemical, Beaver Valley Plant (NOVA) in September 2002. The Inspection Report was completed in June 2003. The Report documented previous solid and hazardous waste management at this site, which has had several changes of ownership.

The report was prepared by Foster Wheeler Environmental Corporation, under contract to PADEP. Foster Wheeler collected and organized "all available relevant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA corrective Action (e.g., from Solid Management Units (SWMU), Regulated Units (RU), and areas of concern" in order to support PADEP's completion of the EPA Environmental Indicator Determination Form that was submitted to EPA on September 2, 2003.

Status

PADEP recommended that both human health and the groundwater indicators be designated "IN." For the human health indicator, an "IN" designation means that PADEP believes that additional information is necessary to determine if releases at the facility are currently a threat to human health. For the groundwater evaluation, an "IN" designation means that additional characterization is necessary to determine whether groundwater contaminant migration is under control.

EPA Region III retains final authority for all RCRA corrective action activities underway in Pennsylvania, since Pennsylvania is not yet authorized for the corrective action program. Thus, while considering PADEP's analysis and recommendations, EPA must make the final decision with regard to the environmental indicators for Lyondell.

Analysis

PADEP's EI evaluation indicated that the groundwater to surface water pathways of certain constituents may not be fully understood. PADEP's review of data stated that "as these results are somewhat of a "snap shot" of groundwater contamination at the site it is unclear if surface water contamination remains at present." Thus, PADEP assessed the groundwater indicator as IN - Insufficient information is available to determine if conditions are "Under Control". Based on the groundwater determination, PADEP expressed uncertainty as to whether or not there is a potential HE exposure pathway from surface or ground water. PADEP assessed the NOVA site HE EI as "IN".

EPA has reviewed both the PADEP recommendations and the EI Inspection Report. In general, there is a large amount of data available on groundwater and surface water quality. Available information indicates that the groundwater is contaminated and discharges directly to surface water. However, the data **does not** indicate that surface water is contaminated above relevant water quality criteria.

EPA guidance on environmental indicators suggests: *In cases where groundwater is being discharged to surface water, you should, as a general matter, focus your groundwater EI evaluation on the question of whether or not contaminated groundwater is significantly impairing the quality of the surface water body. A positive EI determination would generally be appropriate where the groundwater is not affecting the surface water body in a way that leads it to fail basic water-quality criteria.*

PADEP's uncertainty for the human health indicator arises from the potential for human exposure to "contaminated" surface water. Yet, the available surface water sampling and modeling efforts provide evidence that surface water quality criteria are met. Therefore, EPA is modifying the human health indicator to YES, meaning that EPA has determined that there are no unacceptable human health exposures to the groundwater release at NOVA. For the groundwater under control indicator, a similar argument can be made. Groundwater discharging from beneath the NOVA facility has not been shown to cause surface water impacts. However, EPA expects that groundwater monitoring continue in these situations (i.e. where contaminated



groundwater discharges to surface water) at least until the groundwater meets a selected cleanup level at a selected point of compliance. EPA is not aware of any future plans to resume groundwater monitoring, thus EPA agrees with PADEP's recommendation of "IN" for the groundwater indicator.

Conclusion EPA has revised the Environmental Indicators for the NOVA facility after a thorough review of the material prepared by PADEP. EPA has concluded that current human exposures are under control and that groundwater migration is incomplete pending further discussion with NOVA and PADEP. EPA's revision of the EI determinations for the NOVA site is an interim decision within the corrective action process. These determinations are not final Agency decisions and can be changed as a result of new data or additional discussion.

Finally, we should note that corrective action is not "complete" at NOVA, since remedial long-term goals have not been discussed that would normally be part of the remedy selection process.

If you have any questions on the discussion in this letter, please contact me by telephone at: 215-814-3410, or by e-mail at: <gotthold.paul@epa.gov>.

Sincerely,

Paul Gotthold, Chief
PA Operations Branch (3WC2)

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